Remarks

Applicants respectfully request reconsideration of the present U.S. Patent application as amended herein. Claims 22, 32 and 42 have been amended. Claims 1, 4-12 and 14-21 are canceled herein. Claims 2, 3, 13, 23, 24, 33, 34, 43, and 51-60 have been canceled previously. Thus, claims 22, 25-32, 36-42, and 44-50 are pending.

Claim Rejections – 35 U.S.C. § 112, First Paragraph

Claims 32 and 42 were rejected as failing to comply with the written description requirement. Claims 32 and 42 have been canceled. Therefore, the rejection of claims 32 and 42 is moot.

Claim Rejections - 35 U.S.C. § 103(a) - Claims 1, 4, 7, 8, 11, 12, 14, 16-18, 21, 22, 25, and 27-29

Claims 1, 4, 6-8, 11, 12, 14, 16-18, 21, 22, 25, and 27-29 were rejected as being unpatentable over U.S. Patent Application Publication No. 2003/0210221 to Aleksic (*Aleksic*) in view of U.S. Patent Publication No. 2002/0154138 of Wada (*Wada*). Claims 1, 4, 6-8, 11, 12, 14, 16-18 and 21 have been canceled. Therefore, the rejection of claims 1, 4, 6-8, 11, 12, 14, 16-18 and 21 is moot. Applicants respectfully submit that Applicants' invention as claimed is not rendered obvious by *Aleksic* and *Wada* for at least the following reasons.

Claim 22 recites:

> an ambient light sensor to generate signals indicating a sensed ambient light level;
> a display device having an adjustable backlight source; and

> a graphics control device coupled with the ambient light sensor on the display device, the graphics control device to modify pixel color intensity values and contrast corresponding to one or more portions of an image and backlight intensity based on the sensed ambient light level;
>
> wherein the graphics control device modifies backlight intensity based on the sensed ambient light level by causing the duty cycle of a backlight control signal to be modified based on the ambient light level and modifies the pixel color intensity values and contrast corresponding to one or more portions of an image to be displayed on the display device based on the modified backlight intensity, and the graphics control device scales sub-pixel color on a per-pixel basis in order to achieve greater luminance in some areas of the display image, while reducing the luminance in other areas of the display image, wherein a brightness for one or more features within a displayed image is modified;
>
> wherein modification to the pixel color intensity values approximately offsets the modification to the backlight intensity.

Thus, Applicants claim modifying backlight intensity and pixel color intensity for features within an image to be displayed. Specifically, Applicants claim ***modification to the pixel color intensity values approximately offsets the modification to the backlight intensity***.

Aleksic discloses monitoring ambient light and adjusting backlighting in response to ambient light levels. See Paragraph 0028. *Aleksic* further discloses adjusting color. See paragraph 0029. Specifically, *Aleksic* states:

> If a dominant color of the ambient light was detected, the colors displayed on the LCD screen may appear distorted, due to the ambient light. Accordingly, the color of the LCD screen can be altered to correct for the distortion, keeping the colors viewed on the LCD screen to be constant despite changes in the color of the ambient light. The effect of maintaining viewed color is referred to herein as color constancy and is subsequently discussed.

See paragraph 0029. Thus, *Aleksic* does not teach, suggest or even mention modification to the pixel color intensity values approximately offsets the modification to the backlight intensity as recited in the claims.

Wada is cited to teach use of a look up table. See Office Action at page 3. The use of the color look up table in *Wada* is fundamentally different than the claimed invention. Neither *Aleksic* nor *Wada* teach or suggest color brightness modification to approximately offset modification to a backlight intensity that is modified based on ambient light levels. Therefore, no combination of *Aleksic* and *Wada* can teach or suggest the invention as recited in the claims.

The Office Action takes Official Notice of varying luminance in different areas of an image by modifying a color look up table. See Office Action at page 4. In accordance with MPEP §2144.03, Applicant hereby traverses Examiner's Official Notice and respectfully requests that the Examiner either (1) cite a prior art reference that supports such a position pursuant to MPEP § 706.02(a); (2) submit an affidavit pursuant to C.F.R. 1.104(d)(2); or (3) withdraw the obviousness assertion.

Claims 25 and 27-29 depend from claim 22. Because dependent claims include the limitations of the claims from which they depend, applicants submit that claims 22, 25, and 27-29 are not rendered obvious by *Aleksic* and *Wada* for at least the reasons set forth above.

Claim Rejections - 35 U.S.C. § 103(a) – Claims 5, 9, 10, 15, 19, 20, 30-32, 35-42, and 44-50

The Office Action rejects claims 5, 9, 10, 15, 19, 20, 30-32, 35-42 and 44-50 under 35 U.S.C. § 103(a) as being unpatentable over *Aleksic* and *Wada* in view of U.S. Patent No. 6,618,045 issued to Lin (*Lin*). Claims 5, 9, 10, 15, 19 and 20 have been canceled. Therefore, the rejection of claims 5, 9, 10, 15, 19 and 20 is moot. For at least

the following reasons set forth below, Applicants submit that claims 30-32, 35-42 and 44-50 are not rendered obvious by *Aleksic* and *Wada* in view of *Lin*.

Claim 32 recites:

> determine an ambient light level for a display device having an adjustable backlight to provide variable backlight intensity;
> modify the backlight intensity based on the ambient light level by causing the duty cycle of a backlight control signal to be modified based on the ambient light level; and
> modify pixel color intensity values and contrast corresponding to or one or more portions of an image to be displayed on the display device based on the modified intensity of the adjustable backlight, by scaling sub-pixel color on a per-pixel basis in order to achieve greater luminance in some areas of the display image, while reducing the luminance in other areas of the display image, wherein a brightness for one or more features within a displayed image is modified;
> wherein modification to the pixel color intensity values approximately offsets the modification to the backlight intensity.

Claims 42 recites:

> determine an ambient light level for a display device having an adjustable backlight to provide variable backlight intensity by causing the duty cycle of a backlight control signal to be modified based on the ambient light level;
> modify pixel color intensity values and contrast corresponding to one or more portions of an image to be displayed on the display device based on the ambient light level, by scaling sub-pixel color on a per-pixel basis in order to achieve greater luminance in some areas of the display image, while reducing the luminance in other areas of the display image, wherein a brightness for one or more features within a displayed image is modified; and
> modify the backlight intensity based on the modified pixel color intensity values wherein modification to the backlight intensity approximately offsets the modification to the pixel color intensity values.

As discussed above, *Aleksic* and Wada fail to teach or suggest modifying backlight intensity and pixel color intensity for features within an image to be displayed. *Lin* is cited to disclose that "modifying color, brightness, and/or contrast can be done through any combination of software or hardware." Even if properly combined, *Aleksic,*

Wada and *Lin* do not teach or suggest modifying backlight intensity and pixel color intensity for features within an image to be displayed.

Claims 35-41 depend from claim 22. Claims 44-50 depend from claim 42. Because dependent claims include the limitations of the claims from which they depend, applicants submit that *Aleksic* does not render claims 35-41 and 44-50 obvious in further view of *Lin* for at least the reasons set forth above.

As discussed above, *Aleksic* does not teach or suggest the invention as claimed in claim 22 because *Aleksic* fails to disclose "modifying … color intensity values." Therefore, the combination of *Aleksic* and *Lin* is improperly motivated to teach or suggest claims 30, and 31 because the combination fails to disclose modifying color intensity values.

Claim Rejections - 35 U.S.C. § 103(a) – Claim 26

The Office Action rejects claim 26 under 35 U.S.C. § 103(a) as being unpatentable over *Aleksic* and *Wada* in view of U.S. Patent Application No. 2004/0156183 to Kim (*Kim*). For at least the following reasons set forth below, Applicants submit that claim 26 is not rendered obvious by *Aleksic* and *Wada* in view of *Kim*.

Claim 26 depends from claim 22. Claims 22 is shown to be patentable over *Aleksic* and *Wada*. The rejection of claim 26 differs from the rejection of claim 22 in that it further includes the addition of *Kim*. *Kim* is introduced to show a variety of features, but not to show the limitations of claim 22. Accordingly, the rejection of claim 26 should be withdrawn.

Conclusion

For at least the foregoing reasons, Applicants submit that the rejections of the claims have been overcome herein, placing all pending claims in condition for allowance. Such action is earnestly solicited. The Examiner is respectfully requested to contact the undersigned by telephone if such contact would further the examination of the present application. Please charge any shortages and credit any overcharges to our Deposit Account number 02-2666.

Respectfully submitted,

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